U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Barth Smelting Facility - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region II

Subject: **POLREP #2**
RV3
Barth Smelting Facility

Newark, NJ
Latitude: 40.7361892 Longitude: -74.1402096

To:
Mel Hauptman, EPA
Eric Wilson, EPA
Joe Rotola, EPA
Dave Kluesner, EPA
Sophia Kelley, EPA
Walter Mugdan, EPA
John Lapadula, EPA
Will Reilly, EPA
Ellen Harris, Newark Housing Authority
Arthur Martin, Newark Housing Authority
Beckett Grealish, EPA
Lisa Plevin, EPA
Judith Enck, EPA
George Pavlou, EPA
Mary Mears, EPA
Karen Giacobbe, EPA
Tim Grier, EPA
Fred Mumford, NJDEP
Gloria Wright, Newark Housing Authority
Keith Kinard, Newark Housing Authority
George Zachos, EPA
Marty Freeman, EPA
Shonda Bryant, Newark Dept of Health
Patrick Dillon, Newark Department of Child and Family-Well Being

From: Kimberly Staiger, OSC
Date: 12/20/2013
Reporting Period: 12/16/2013 to 12/20/2013

1. Introduction

1.1 Background

Site Number:	A22L	**Contract Number:**	EP-S2-10-03
D.O. Number:		**Action Memo Date:**	9/26/2013
Response Authority:	CERCLA	**Response Type:**	Emergency
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	12/4/2013	**Start Date:**	12/4/2013

243327

Demob Date:	12/20/2013	**Completion Date:**	
CERCLIS ID:	NJN008010373	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category
Emergency Removal Action

1.1.2 Site Description
The former Barth Smelting Corporation was located at 99 Chapel Street, Newark, New Jersey. The Site includes the historic footprint of the former Barth facility (Block 2442, Lots 10, 11, 12) and the extent of lead contamination adjacent to the former facility, including the former playground and grassy areas adjacent the community building on the Newark Housing Authority (NHA) Terrell Homes property.

Barth Smelting Corp. operated on the 99 Chapel Street property, specifically Block 2442, Lots 10, 11, 12, from at least 1946 until the late 1970s, producing brass and bronze ingots and working with non-ferrous metals. Barth was listed as an unrecognized Battery Lead Smelter site with a paper titled “Discovering Unrecognized Lead Smelting Sites by Historical Methods” written by William Eckel et al, and published in the American Journal of Public Health, April 2001.

Prior operators at the 99 Chapel Street property include General Lead Batteries, a manufacturer of lead acid batteries, and the New Jersey Zinc Company, a former zinc smelter. The New Jersey Zinc and Iron Company, also known as the Newark Zinc Works, formerly operated their large facility on the 99 Chapel Street property as well as the property now occupied by the Newark Housing Authority's Terrell Homes. The Zinc Works was one of the first commercial zinc oxide plants in the United States and operated on this location from 1848 to 1910. After the cessation of operations, the New Jersey Zinc & Iron Company buildings were demolished and the property subdivided. In 1946, the Millard E. Terrell Homes, a family development with 275 units, was constructed on one of the parcels of property formerly occupied by the New Jersey Zinc and Iron Company.

1.1.2.1 Location

The Terrell Homes are located in a mixed residential/industrial neighborhood within the Ironbound Section of Newark, Essex County, New Jersey. The property was formerly home to the New Jersey Zinc and Iron Company from 1848 to 1910, and was located adjacent to the former Barth Smelting Corporation facility. The property is bounded to the west by the Passaic River and the Essex County Riverfront Park, to the east by Chapel Street, to the north by the former Barth Smelting Corp. property, and to the west by a large commercial property.

1.1.2.2 Description of Threat
Lead concentrations have been detected exceeding the EPA residential soil screening level of 400 mg/kg within the top two feet of soil at the Terrell Homes housing complex within the grassy area immediately adjacent the Community Building and within the former playground area. The results from lead in the surface soil sampled at 0-1" depth interval ranged from 85 ppm to 9,800 ppm and in the highest concentration of lead detected in soils in the top one inch is 9,800 ppm and in the 1-6" depth interval ranged from 46 to 7,130 ppm.

Direct contact with the elevated levels of lead within the top one inch of soil may occur through common outdoor activities that occur in the play area, or by tracking lead contaminated dirt inside the home. Contact with the lead contaminated soils may present a health risk to residents, particularly young children.

The effects of exposure to lead are the same whether it enters the body through breathing or swallowing. The main target for lead toxicity is the nervous system, both in adults and children. Long-term exposure of adults to lead has resulted in decreased performance in some tests that measure functions of the nervous system. Lead exposure may also cause weakness in fingers, wrists, or ankles. Lead exposure also causes small increases in blood pressure, particularly in middle-aged and older people, and may also cause anemia.

Lead is a cumulative poison where increasing amounts can build up in the body eventually reaching a point where symptoms and disability occur. Particularly sensitive populations are women of child-bearing age, due to the fetal transfer of lead, and children. Cognitive deficits are associated with fetal and childhood exposure

to lead. An increase in blood pressure is the most sensitive adverse health effect from lead exposure in adults. Effects on the kidney, nervous system and heme-forming elements are associated with increasing blood lead concentrations, both in children and adults. Other symptoms include: decreased physical fitness, fatigue, sleep disturbance, aching bones, abdominal pains, and decreased appetite.

The Department of Health and Human Services (DHHS) has determined that lead and lead compounds are reasonably anticipated to be human carcinogens based on limited evidence from studies in humans and sufficient evidence from animal studies, and the EPA has determined that lead is a probable human carcinogen.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Soil samples collected from the former playground area of the Terrell Homes on December 3-4, 2012 indicated that elevated levels of lead were found to be present in the surface soils (0 - 2 foot depth interval) of the playground. Additional soil borings were installed throughout the Terrell Homes property from March 29 - April 1, 2013 to determine if historic operations conducted on this property and adjacent properties had impacted the soils. A total of thirty soil borings were installed throughout the property, and each soil boring was completed to a depth of two feet.

Two of the soil borings were installed in a grassy area adjacent the Community Building. The Community Building serves as a recreational area for the residents and contains a water park area (sprinklers) for children to play outdoors and a basketball court. Elevated levels of lead, which pose a significant threat to the local residents, were detected in the grassy area immediately adjacent the water park area. Additional sampling was performed from May 15-16, 2013 in the grassy area adjacent the Community Building to further characterize the nature and extent of the lead contamination. Elevated concentrations of lead were found along the northern property line and extending approximately 25 feet onto the property.

Soil samples collected from the former playground area of the Terrell Homes on December 3-4, 2012 indicated that elevated levels of lead were found to be present in the surface soils (0 - 2 foot depth interval) of the playground. Additional soil borings were installed throughout the Terrell Homes property from March 29 - April 1, 2013 to determine if historic operations conducted on this property and adjacent properties had impacted the soils. A total of thirty soil borings were installed throughout the property, and each soil boring was completed to a depth of two feet.Two of the soil borings were installed in a grassy area adjacent the Community Building. The Community Building serves as a recreational area for the residents and contains a water park area (sprinklers) for children to play outdoors and a basketball court. Elevated levels of lead, which pose a significant threat to the local residents, were detected in the grassy area immediately adjacent the water park area. Additional sampling was performed from May 15-16, 2013 in the grassy area adjacent the Community Building to further characterize the nature and extent of the lead contamination. Elevated concentrations of lead were found along the northern property line and extending approximately 25 feet onto the property.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

An Action Memorandum was signed on September 26, 2013 authorizing EPA to conduct a time-critical removal action to address the threats posed by lead contaminated soil on the Terrell Homes, a residential multi-family public housing complex owned by the Newark Housing Authority.

Soil sampling data has identified this area of the Site to contain elevated levels of lead which poses a significant threat to the residents. The removal action will include the removal of lead contaminated soil within the unpaved play areas located along the northern boundary of the Terrell Homes property and EPA oversight of Chapel Street Partners' construction of erosion controls on the property line between the Terrell Homes and the 99 Chapel Street property to prevent lead contaminated soil from migrating onto the adjacent unpaved play areas at the Terrell Homes.

This will be the third removal action conducted on this property.

2.1.2 Response Actions to Date
Soil samples collected from the playground area of the Terrell Homes property on December 3-4, 2012 indicated that elevated levels of lead were present in the top two feet of soil in the playground area. EPA mobilized to the Terrell Homes with ERRS on February 21, 2013 to install 6' high temporary chain link fencing around the playground portion of the property restricting access to the lead contaminated soils. Signs were placed on the fencing warning residents to keep out of the fenced off area.

Additional soil sampling performed in March and May 2013 confirmed the presence of elevated concentrations of lead along the northern property line of the Terrell Homes and extending approximately 25 feet onto the unpaved areas of the property. EPA mobilized to the Barth Smelting site with ERRS on May 13, 2013 to install additional 6' high temporary chain link fencing to restrict access to the grassy area adjacent the community building and recreation area within the northern portion of the property. This fencing is an extension of the original temporary fencing. All of the grassy areas along the northern property boundary of Terrell Homes have been fenced off.

EPA mobilized to the Terrell Homes portion of the Barth Smelting site with ERRs on December 4, 2013 to initiate the removal action. RST conducted background dust monitoring before the initiation of soil intrusive work. Removal activities began at the Barth Smelting site on Thursday, December 5th with the removal of trees, shrubs and fencing as necessary for the removal of contaminated soil. A total of ten trees one foot or larger in diameter have been removed from within the excavation area. The 10' high chain link fencing present along the northern property boundary within the fenced off area was removed on December 6 and December 9, 2013 and has been staged on the 99 Chapel Street property.

Soil excavation was started in the former playground area adjacent Chapel Street on December 11, 2013. The top one foot of lead-contaminated soil has been removed from the grassy areas within the fenced off area. Geotextile fabric has been lain across the bottom of the excavation and along the northern property line sidewall before backfilling the excavation. Backfilling and soil regrading was completed on December 20, 2013. Silt fencing has been installed at the boundaries of the backfilled area to prevent any soil erosion until EPA returns in the Spring to complete the restoration activities.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)
PRPs have not been identified to date, but a PRP search will continue.

2.1.4 Progress Metrics

Waste Stream	***Medium***	***Quantity***	***Manifest #***	***Treatment***	***Disposal***
Lead	Soil	600 tons	N/A	N/A	Landfill

2.2 Planning Section

2.2.1 Anticipated Activities
Chapel Street Partners is planning to submit a Work Plan for the construction of erosion controls along the property line. The work plan will be reviewed by EPA, and all work will be done under EPA oversight.

A community update will be drafted to inform residents about the cleanup, and future restoration activities.

2.2.1.1 Planned Response Activities
EPA review of Chapel Street Partners work plan for the erosion controls to be installed on the property line,and oversight for the construction of the erosion controls. Restoration of the property, including tree replanting and hydroseeding, is planned for early Spring 2014.

2.2.1.2 Next Steps
EPA will be returning to the Site on January 6, 2014 to complete a topographical survey to determine current grade within the remediated area, and will also be laying out straw erosion control matting to hold the soils in place until the final restoration activities in the Spring.

2.2.2 Issues

The Terrell Homes is located in the Ironbound section of Newark, a recognized Environmental Justice community that has many disadvantages. The Terrell Homes property is a low-income public housing development with 275-units. Occupance of public housing at Newark Housing Authority properties is dictated by income, with preferences for elderly, disabled and DYFS (Division of Youth and Family Services) referrals.

2.3 Logistics Section

All personnel and equipment has been demobilized.

2.4 Finance Section

2.4.1 Narrative

Action Memorandum to conduct a time-critical removal action at the Barth Smelting Site was signed on September 26, 2013. This is the third removal action on this Site.

ERRS contractor mobilized to the Site to receive delivery of equipment on December 4, 2013. ERRS mobed to the site to begin removal activities on December 5, 2013. Fencing, trees and shrubs have been removed as necessary for the soil excavation. Excavation activities and T&D has been completed.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	$704,000.00	$226,465.00	$477,535.00	67.83%
TAT/START	$100,000.00	$10,175.00	$89,825.00	89.83%
CLP	$25,000.00	$1,935.00	$23,065.00	92.26%
Intramural Costs				
Total Site Costs	$829,000.00	$238,575.00	$590,425.00	71.22%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

Not applicable

3. Participating Entities

Newark Housing Authority
Newark Department of Health

4. Personnel On Site

All personnel have been demobilized from the Site.

5. Definition of Terms

ERRS - Emergency and Rapid Response Services
RST - Removal Support Team
NHA - Newark Housing Authority

6. Additional sources of information

6.1 Internet location of additional information/report

Additional information on the Barth Smelting site can be found at http://www.epa.gov/region2/superfund/removal/barth/index.html and at www.epaosc.org/Barthsmelting.

7. Situational Reference Materials

No information available at this time.